

1. Find the sum of the measures of the interior angles of the convex polygon.

Heptagon = _____

2. Find the measure of each interior and exterior angle in the regular polygon.

45-gon: Interior = _____, Exterior = _____

3. Given that 120° is the measure of an interior angle of a regular polygon,

the number of sides = _____

4. Given hexagon $ABCDEF$, find the value of $x =$ _____
and the measure of each angle:

$m\angle A =$ _____

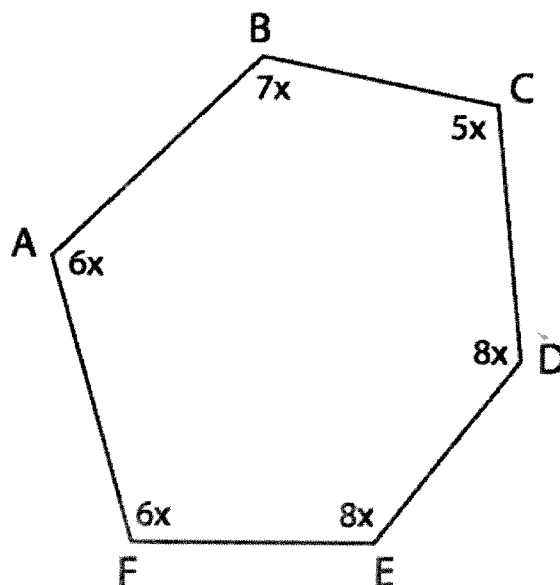
$m\angle B =$ _____

$m\angle C =$ _____

$m\angle D =$ _____

$m\angle E =$ _____

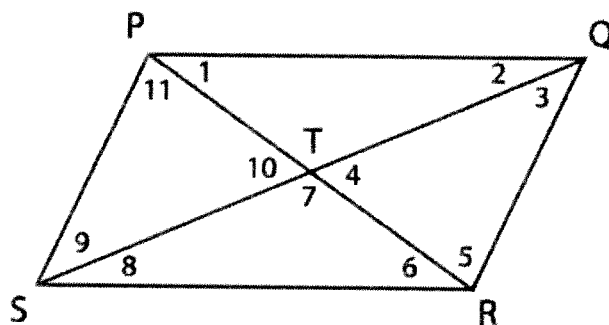
$m\angle F =$ _____



5. Given that 6° is the measure of an exterior angle of a regular polygon,
the number of sides of the polygon = _____

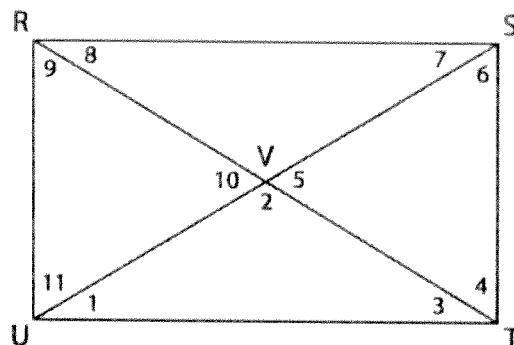
For the following problems, use the associated figure to answer questions about each quadrilateral.

PQRS is a parallelogram. Find the unknown measure(s).



6. If $m\angle 2 = 25^\circ$ and $m\angle 9 = 48^\circ$, then $m\angle SPQ =$ _____
7. If $PQ = 7x - 3$ and $SR = 5x + 5$, then $PQ =$ _____
8. If $ST = 8$, then $SQ =$ _____
9. If $m\angle PSR = 75^\circ$, then $m\angle PQR =$ _____, $m\angle QRS =$ _____

$RSTU$ is a rectangle. Find the unknown measure(s).



10. If $m\angle 1 = 9x - 3$ and $m\angle 3 = 7x + 5$, then $m\angle 3 =$ _____

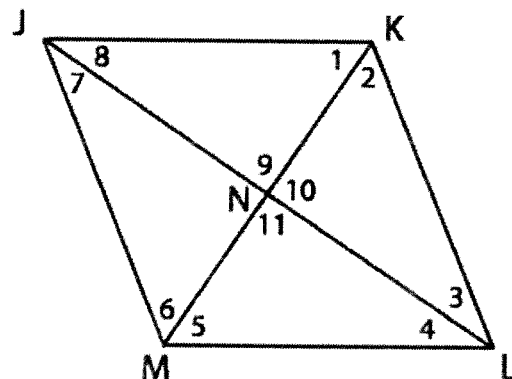
11. If $RV = 4x + 1$ and $RT = 10x - 2$, then $RT =$ _____

12. If $m\angle 11 = 11x + 4$ and $m\angle 7 = 6x + 1$, then $m\angle 7 =$ _____

13. If $m\angle 4 = 54^\circ$, then $m\angle 5 =$ _____ and $m\angle 2 =$ _____

$JKLM$ is a rhombus. Find the unknown measure(s).

14. If $MN = 6x - 5$ and $NK = 4x + 1$, then $MN =$ _____



15. If $m\angle 10 = 7x - 8$, then $x =$ _____

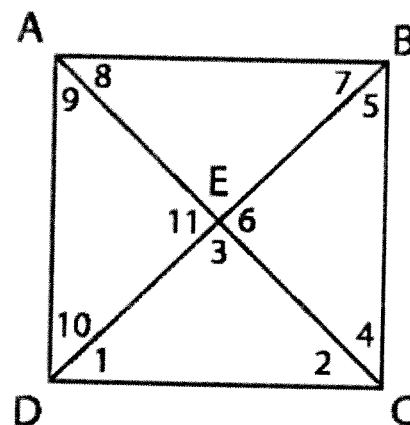
16. If $m\angle 6 = 52^\circ$, then $m\angle JKL =$ _____

17. If $KL = 13$, then $ML =$ _____, $JM =$ _____, $JK =$ _____

$ABCD$ is a square. Find the unknown measure(s).

18. If $AB = 5x + 1$ and $BC = 8x - 11$, then

$AB =$ _____, $BC =$ _____, $CD =$ _____, $AD =$ _____



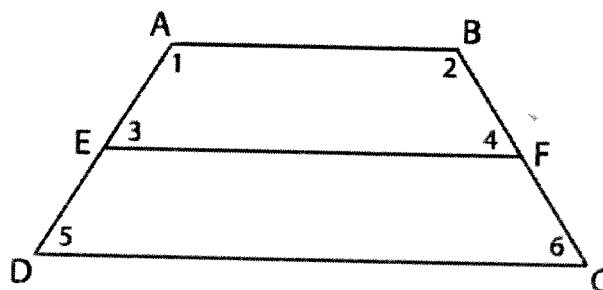
19. If $m\angle 3 = 8x + 2$, then $x =$ _____

20. If $AE = 19$, then $DB =$ _____

21. $m\angle 1 =$ _____

$ABCD$ is an isosceles trapezoid with median EF . Find the unknown measure(s).

22. If $AB = 11$ and $DC = 23$,
then $EF =$ _____



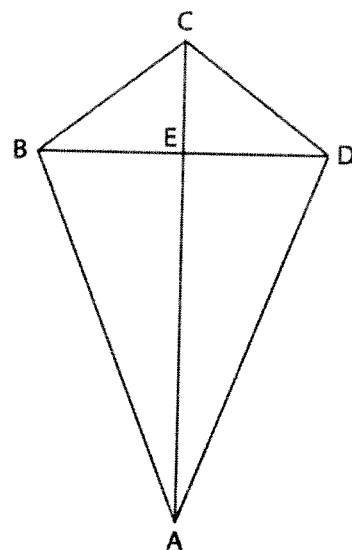
23. If $AD = 3x - 2$ and $BC = x + 6$, then $AD =$ _____

24. If $AE = 7$, then $ED =$ _____

25. If $m\angle 6 = 43^\circ$, then $m\angle 4 =$ _____, $m\angle 5 =$ _____ and $m\angle 2 =$ _____

$ABCD$ is a kite. Find the unknown measure.

26. If $AB = 8x - 2$, and $AD = 6x + 4$, then $AD =$ _____



27. If $m\angle CED = 7x + 6$, then $x =$ _____

28. If $m\angle ABC = 12x + 10$ and $m\angle ADC = 15x - 14$, then $m\angle ADC =$ _____

29. If $m\angle BAC = 24^\circ$, then $m\angle DAC =$ _____